ROSSI, B.D., kand.tekhn.nauk; USACHEV, V.A., inzh.

Determining the composition and the amount of poisonous gases formed during the use of "igdanit" in blasting. Nauch. soob. IGD 21:59-66 '63. (MIRA 17:2)

DEMIDYUK, G.P., kand. tekhn. nauk; ROSSI, B.D., kand. tekhn. nauk;
ANDRIANOV, N.F., gornyy inzh.; USACHEV, V.A., inzh.

Effect of stemming on the amount of crushing of rocks by blasting. Vzryv. delo no.53/10:96-105 '63. (MIRA 16:8)

(Blasting)

ACCESSION NR: AP4015296 S/0280/64/000/001/0086/0093

AUTHOR: Paderno, I. P. (Leningrad); Usachev, V. A. (Leningrad)

TITLE: Some fundamentals of mass-servicing systems having a constant production and failures (losses)

SOURCE: AN SSSR. Izvestiya. Tekhnicheskaya kibernetika, no. 1, 1964, 86-93

TOPIC TAGS: quequeing theory, mass servicing system, constant production mass servicing system, Erlang mass servicing system, all apparatae servicing

ABSTRACT: The quantitative characteristics of a quequeing system in which incoming orders are serviced simultaneously by all service apparatae are considered. If the number of orders equals that of the apparatae, new orders are not filled (losses). The system in question is based on these assumptions: (1) On arrival of an order, all apparatae service it, the time of servicing of one order by all apparatae being fortuitous and obeying an exponential law of distribution with a mean value $1/\mu$, hence, $P\{\tau<t\}=1-\exp(-\mu t)$. (2) On every change of the

Card 1/2

ACCESSION NR: AP4015296

number of orders, the servicing apparatae are so redistributed that every order receives an equal number of servicing apparatae; (3) If the number of orders exceeds that of the apparatae, new orders are not serviced; (4) The incoming stream of orders is of the simplest type, with a parameter λ . Formulas are given for determining (a) the probabilities of the number of orders in the system under transient and steady-state conditions and (b) mean duty of the apparatae. As compared to the conventional Erlang system, the new "constant-production" system is claimed to have: (a) generally lower losses, (b) particularly lower losses at higher numbers of apparatae and higher duty factors, and (c) a higher average number of busy apparatae. Orig. art. has: 3 figures and 30 formulas.

ASSOCIATION: none

SUBMITTED: 09Aug63 DATE ACQ: 12Mar64 ENCL: 00

SUB CODE: CG, IE NO REF SOV: 005 OTHER: 002

Card 2/2

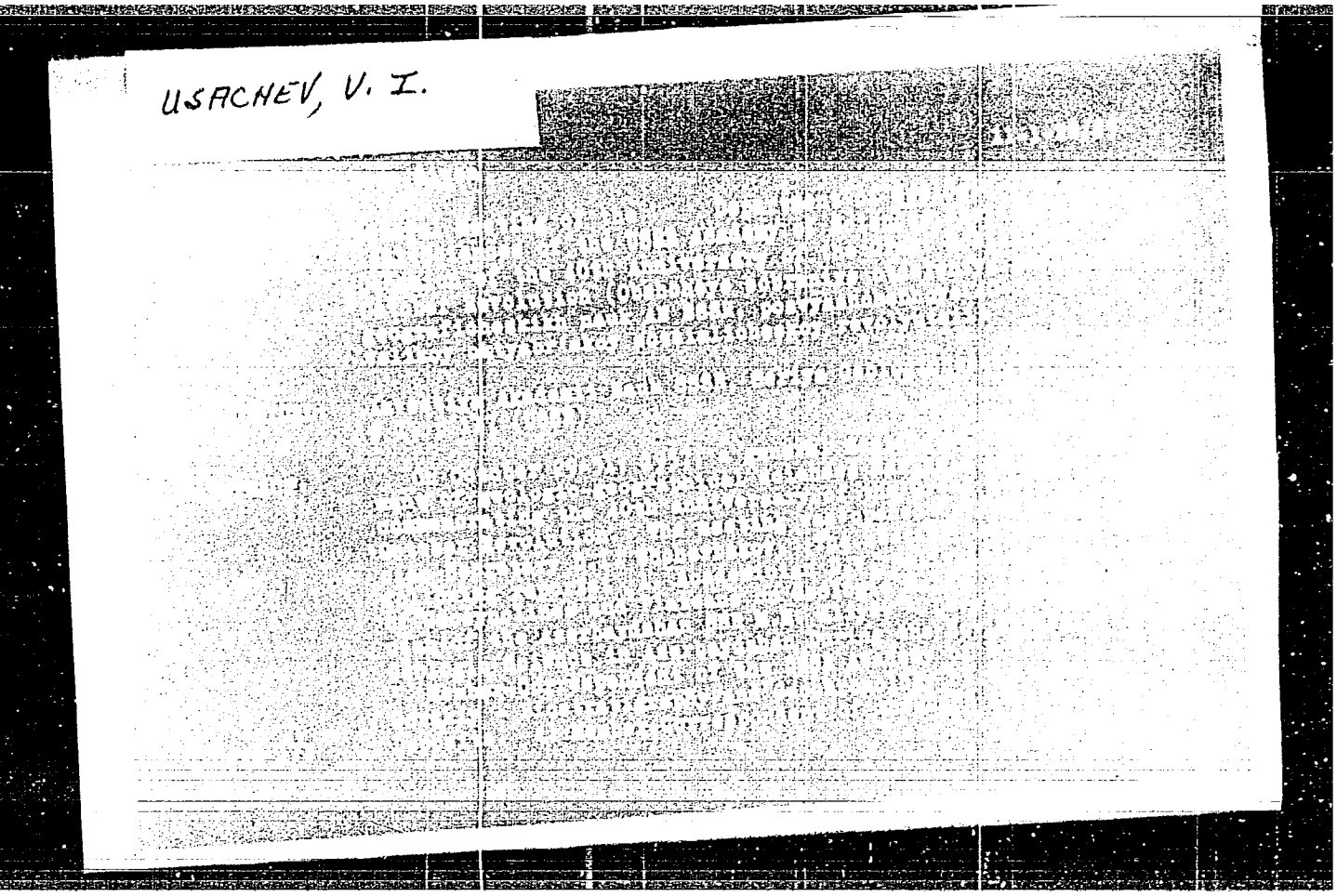
KOFMAN, D.M., kand.tekhn.nauk; USACHEV, V.F., kand.tekhn.nauk

Links between science and production are getting stronger.
Tekst.prom. 20 no.4:90-91 Ap '60. (MIRA 13:8)
(Textile industry)

USACHEV, V.F.

Results of the scientific work of the S.M.Kirov Textile Institute in Leningrad. Izv.vys.ucheb.zav.;tekh.tekst.prom. no.2:142-144 '60. (MIRA 13:11)

(Leningrad--Textile--Research)



ABRAMOV, M.A.; ALIVERDIZADE, K.S.; AMIROV, Ye.M.; ARENSON, R.I.; ARSEN'YEV, S.I.; BAGDASAROV, R.M.; BAGDASAROV, G.A.; BADAMYANTS, A.A.; DANIYELYAN, G.N.; DZHAFAROV, A.A.; KAZAK, A.S.; KERCHENSKIY, M.M.; KONYUKHOV, S.I.; KRASNOBAYEV, A.V.; KURKOVSKIY, A.I.; LALAZAROV, G.S.; LARIONOV, Ye.P.; LISTENGARTEN, M.Ye.; LIVSHITS, B.L.; LISIKYAN, K.A.; LOGINOVSKIY, V.I.; LYSENKOVSKIY, P.S.; MOLCHANOV, G.V.; MAYDEL'MAN, N.M.; OKHON'KO, S.K.; ROMANIKHIN, V.A.; ROSIN, I.I.; RUSTAMOV, E.M.; SAKISOV, R.T.; SKRYPNIK, P.I.; SOBOLEV, N.A.; TARATUTA, R.N.; TVOROGOVA, L.M.; TER-GRIGORYAN, A.I.; USACHEV, V.I.; FAYN, B.P.; CHICHEROV, L.G.; SHAPIRO, Z.L.; SHEVCHUK, Yu.I.; TSUDIK, A.A.; ABUGOV, P.M., red.; MARTYNOVA, M.P., vedushchiy red.; DANIYELYAN, A.A.; TROF'IMOV, A.V., tekhn.red.

[Oil field equipment; in six volumes] Neftianoe oborudovanie; v shesti tomakh. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry. Vol.3. [Petroleum production equipment] Oborudovanie i instrument dlia dobychi nefti. 1960. 183 p. (MIRA 13:4)

(Oil fields--Equipment and supplies)

ACCESSION NR: AP4040702 S/0135/64/000/006/0025/0028

AUTHORS: Moiseyev, I. A. (Candidate of technical sciences); Sinyavskiy, V. S. (Candidate of technical sciences); Usachev, V. I.(Engineer); Pashkov, N. V.(Engineer)

TITLE: On the fatigue strength of aluminum alloy welds

SOURCE: Svarochnoye proizvodstvo, no. 6, (630), 1964, 25-28

TOPIC TAGS: welding, aluminum alloy AMg6, aluminum alloy AMg61, aluminum alloy AD33, filler metal AK, fatigue strength, impact strength, argon, arc welding, electrode, butt welding, pin support

ABSTRACT: The strength of aluminum alloy welds in flat and three-dimensional structures was studied to determine the effect of the seam form, spacing, and the technique of weld finishing on the durability of joints. All joints were welded by the same technique (argon arc welding with fusible electrodes). Flat samples consisted of: 1) plated and non-plated metals, 2) butt welds with and without final mechanical finish, 3) samples with central collars or bosses of rectangular section, made of solid metal (no welding) and samples with welded collars and bosses (complete and incomplete penetration). The joints were simulated in three-dimensional models. All samples were made of three aluminum alloys: AMg6, AMg61

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ACCESSION NR: AP4040702

and AD-33; filler metal used for the first two was of the same composition while the AK electrode was used for AD-33. The results showed that the fatigue strength of unplated specimens was 13-15% higher than of the plated ones. Unwelded AMg6 and AMg61 specimens had equal fatigue strengths, which were 23% higher than that of AD-33. Finish milling of butt welds produced a 16% increase in strength, while pneumatic hammering raised the fatigue strength almost to the level of alloy AMg6. Because the AK electrode strength is lower than that of the AD-33, the weld strength is 23% lower than that of the original metal. In the composite structures the density and intersections of seams had a weakening effect on the welds. Surface hardening of the joint and the adjacent metal area considerably increased the strength. Engineer G. S. Sary*cheva participated in this work. Orig. art. has: 2 tables and 5 figures.

ASSOCIATION: TsNII MPS

SUBMITTED: 00 ENCL: 00

SUB CODE: MM NO REF SOV: 009 OTHER: 000

Card 2/2

SERGIYENKO, V.D.; STOROZHIK, D.A.; USACHEV, V.P.

Using electromagnetic vibrating screens for the sieving of coke breeze. Metallurg 10 no.9:3-5 S '65. (MIRA 18:9)

Usachev, V. V.

93-5-12/19

AUTHORS: Korsunskiy, V. B., Usachev, V. V., Mazur, A. A., Chief Engineers of the Refineries Under Construction

TITLE: Over-all Designing of Refineries (Za kompleksnoye proyektirovaniye neftepererabatyvayushchikh zavodov) Organization of Refinery Designing (Ob organizatsii proyektirovaniya neftepererabatyvayushchikh zavodov)

PERIODICAL: Neftyanoye Khozyaystvo, 1957, Nr 5, pp. 47-51 (USSR)

ABSTRACT: The planned expansion and construction of large refineries in the Soviet Union calls for a great deal of work on the part of designing engineers. This work is useless unless it is properly and efficiently organized. The Minister of the Petroleum Industry of the USSR, M. A. Yevseyenko, raised this question at the 20-th Congress of the Communist Party of the USSR, but so far no measures have been taken to improve designing. Three shortcomings in designing refineries and petrochemical plants are discussed, namely: 1) the separation of individual designing organizations from the projects designed by them; 2) the distribution and separation of

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Over-all Designing of Refineries (Cont.)

designing organizations from each other; 3) a large number of designing organizations designing the same plants. The following organizations are now engaged in designing new refineries: Giproneftezavod (State Institute for the Design and Planning of Oil Refineries), Giproazneft' (State Institute for the Design and Planning of the Azerbaydzhan Petroleum Industry), Lengiprogaz (Leningrad State Institute for the Design and Planning of Synthetic Liquid Fuel and Gas Plants), Giprogroznefť (State Institute for the Design and Planning of the Groznyy Petroleum Industry), and branch offices of the Giproneftezavod and Lengiprogaz. From time to time, the plants are located at a distance of several thousand kilometers from the designing organization. For example, the Molotovskiy Refinery is designed in Leningrad, the Yaroslavl' Refinery by the Rostov-on-Don branch office of the Giproneftezavod, and the designing of the Fergana, Irkutsk and certain other refineries is done in Baku. Designing of individual refinery installations and units is often done on a subcontract basis by special designing organizations belonging to other ministries. The designing work could be done by the main designing organization, which would avail itself of the

Over-all Designing of Refineries (Cont.)

services of specialists on a consultative basis. As a result there are sometimes ten or even more organizations designing the same plant. Such an arrangement results in volumes of unnecessary correspondence, dealing with the changes in the designing schedule. It takes weeks and sometimes even months to solve problems which ordinarily should be solved within an hour. Chief engineers in charge of refinery designing visit the construction site once or twice a year, while directors and heads of other sections of the designing institute visit those plants even less frequently. As a rule, the engineers never see the units designed by them. Blueprints are frequently prepared too late or prematurely. There is a lack of coordination among various specialized construction crews. Isolation and separation of general designing organizations frequently upset the over-all designing schedule, cause duplication of work and lead to ignorance on the part of one institute of what other institutes are doing. In designing the Stalingrad Refinery it was discovered that a cinder dump had been superimposed over industrial-waste treating plants and the industrial-waste treating plant over a trunk pipeline. This situation had to be

Over-all Designing of Refineries (Cont.)

remedied without the participation of the general designer, i.e. Giproazneft', while the cinder dump was designed by ROTER, the treating plant by RO Vodokanalproyekt and the pipeline by Giprotransneft'. A somewhat similar situation occurred in connection with the laying of a pipeline (Lengiprotransneft') over a dike, designed by the Khar'kov Promtransproyekt Institute across the Tat'yanka Arm. The dike was constructed before the plans for the pipeline arrived and consequently it had to be cut to a depth of one meter and after the pipeline had been laid it had to be backfilled. These examples show the harmful effects of the multiplicity of designing organizations, their isolation from each other and from the construction projects on the course and speed of the construction of refineries. This situation can be remedied, first of all, by having all the designing done in one institute of designing, for example, in Giproneftezavod. This institute should have specialists representing the allied fields and all the bibliographic material and archives dealing with the construction of refineries should be transferred there. The institute should be made responsible for the selection of refinery sites, development of general plants, designing problems

Over-all Designing of Refineries (Cont.)

and estimates, and for designing of new engineering processes. There should be a constant revision of former designs, due consideration being given to both domestic and foreign experience. The institute should cooperate with other scientific research organizations. The actual designing of refineries should be turned over to the branch offices of the institute. Their work will be done at the site of the planned refinery, allowing the designers to have direct contact with the construction work, to make changes and improvements and see their results. At the present time chief engineers of refinery designing have very little influence over the course of the designing since they have no control over the designing branches. These branches should be placed under the chief engineers of designing so as to hold them responsible for all aspects of designing.

AVAILABLE: Library of Congress

Card 5/5

DMITRIYEV, P.P.; USACHEV, V.V.; CHERNOV, M.F.

Some considerations concerning the formation and decomposition of a carbamide complex. Uzb.khim.zhur. no.6:74-82 '59. (MIRA 13:4)

1. Institut khimii AN UzSSR i Farganskiy neftepererabatyvayushchiy zavod.
(Urea) (Hydrocarbons)

S/081/61/000/024/068/086
B102/B108

AUTHORS: Usachev, V. V., Dmitriyev, P. P.

TITLE: Fractioning of n-paraffins by decomposition of the carbamide complex

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 24, 1961, 468, abstract 24M73 (Uzb. khim. zh., no. 3, 1961, 64 - 74)

TEXT: Narrow fractions of n-paraffin hydrocarbons are proposed to be produced via formation of a complex by means of carbamide with the initial hydrocarbon mixture, and subsequent decomposition of this complex by fractional addition of various portions of water. The following was obtained: a) 10 fractions of n-paraffins with solidification temperatures between 18 and 36°C from the diesel fuel of the ferganskiy neftepererabatyvayushchiy zavod (Fergana petroleum refining plant); b) 11 fractions with solidification temperatures between 9 and 30°C from a soft paraffin of a Moscow plant. A method of multiple fractioning is proposed which is based on the following: the n-paraffin fractions resulting from successive decomposition of the complex are again introduced, each

Card 1/2

Fractioning of n-paraffins...

separately, into complexes with carbamide which are subsequently subjected to another decomposition by water. 40 narrow fractions with solidification temperatures between -9 and 32°C were obtained as a result of the multiple fractioning of the soft paraffin with 14° solidification temperature. These fractions differ only little in their refractive indices and specific weights. [Abstracter's note: Complete translation.]

Card 2/2

USACHEV, V.V.; DMITRIYEV, P.P.; GEYFEN, S.I.

Production of low pour point diesel fuels from Fergana oils by the method of carbamide dewaxing. Uzb.khim.zhur. 6 no.6:67-78 '62. (MIRA 16:2)

1. Institut ispol'zovaniya topliva AN UzSSR, Sovet narodnogo khozyaystva UzSSR i Institut khimii AN UzSSR.
(Diesel fuels) (Fergana--Petroleum)

SAID-KHODZHAYEV, A.V.S.A.; [illegible]ZHIK, Ya.S.; USACHEV, V.V.

Removal of the petroleum, mazut, and lubricant sediments in heat exchangers. Neftepер. i neftekhim. no.6:39-40 '64. (MIRA 17:9)

1. Nauchno-issledovatel'skiy institut silikal'tsita i Baltiyskoye Gosudarstvennoye morskoye parokhodstvo, g. Tallin, i Institut ispol'zovaniya topliva, g. Tashkent.

USACHEV, V. V., KOMENDANTOV, G. L., BABUSHKIN, V. I., IVANOV, P. N., MALKIN, V. B. and MANSUROV, A. R.

"The Effect of Accelerations Upon the Human Organism" (The Eighth All-union Congress of Physiologists, Biochemists, and Pharmacologists), pp. 313-314, Moskva, 1955.

BABUSHKIN, V.I., podpolkovnik meditsinskoy sluzhby; MALKIN, V.B., kandidat meditsinskikh nauk; USACHEV, V.V., podpolkovnik meditsinskoy sluzhby

Some data on the body's adaptation to the effect of radial acceleration. Voen.-med. zhur. no.4:10-19 Ap '56. (MLRA 9:9)
(AVIATION MEDICINE)

T-12

USSR/Human and Animal Physiology (Normal and Pathological). Physiology of Work and Sports. Aviation Physiology.

Abs Jour : Ref Zhur - Biol., No 16, 1958, 75249

Author : Usachev, V.V.

Inst :

Title : On the Problem of the Reasons of the Visual Impairments During Long Accelerations.

Orig Pub : Voyen.-med. zh., 1956, No 4, 19-21

Abstract : Results are discussed of experimental investigations of Duane (Arch. Ophthalmol., 1954, 51, 3) on the condition of the vascular system of the internal carotid artery in man during effects of radial acceleration. He observed three periods of change of vessels of the ocular fundus. The period of beginning arterial pulses, accompanied by loss of peripheral vision, usual proceeded quickly (2-3 sec.) and was transfered into the period of arterial anemia with loss also of central vision (i.e. full loss of

Card 1/2

USACHOV, V. V.

EXCERPTA MEDICA Sec.18 Vol.1/7 Cardiovascular July 57

2115. USACHOV V. V. Moscow *Effect of radial acceleration on vasomotor conditioned reflexes (Russian text)* Z.vysc.nerv.dejatel. 1956, 6/4 (555—560) Graphs 5

A vasomotor conditioned reflex to a sound of a buzzer, reinforced by cooling the skin with water at 4—5° C., was established in 5 healthy young men; a lower sound of the buzzer was the inhibitory differential stimulus. When the experiment had been preceded by rotating the subject in a large centrifuge (3.5 m. radius) at 5—6 g acceleration for at least 20 sec., the positive vasomotor conditioned reflexes were much delayed and decreased, and the inhibitory reflexes were disinhibited. It was found, however, that a prolonged training might diminish this effect.

Wyrwicka – Warsaw (II, 18)

USACHEV, V.V.

USACHEV, V.V., podpolkovnik meditsinskoy sluzhby

Effect of radial acceleration on the operating movements of fliers. Voen.-med.zhur. no.7:81 Jl '57. (MIRA 11:1)
(AVIATION MEDICINE)

USSR / Human and Animal Physiology (Normal and Pathological). Neuromuscular Physiology T

Abs Jour: Ref Zhur-Biologiya, No 21, 1958, 97825

Author : Babushkin, V. I., Isakov, P. K., Malkin, V. E., Usachev, V. V.

Inst : Not given

Title : Study of Bioelectric Activity of Skeletal Musculature in Man by the Action of Radial Accelerations

Orig Pub: Fiziol. zh. SSSR, 1958, 44, No. 6, 10-13

Abstract: Those tested (10 persons 20 to 30 years old) were placed in centrifugal arm chairs. The time of acceleration (A) action of maximum intensity was 20 seconds. In all those tested, an increase in bioelectric activity of the skeletal musculature

Card 1/2

USACHEV, V. V.

BARUSHKIN, V.I.; ISAKOV, P.K.; MALKIN, V.B.; USACHEV, V.V. (Moskva)

Respiration and gas exchange in man subjected to radial acceleration [with summary in English]. Fiziol.zhur. 44 no.4:342-347 Ap '58. (MIRA 11:4)

(RESPIRATION,
eff. of rotation of man in centrifuge (Rus))
(CENTRIFUGATION,
eff. of rotation of man in centrifuge on resp. & exchange of gases (Rus))

17.2250
27.2500

32556
S/177/61/000/006/001/003
D298/D305

AUTHORS: Babushkin, V.I., Lieutenant-Colonel, Medical Corps, Candidate of Medical Sciences, Isakov, P.K., Colonel, Medical Corps, Candidate of Biological Sciences, Malkin, V.B., Candidate of Medical Sciences, and Usachev, V.V., Lieutenant-Colonel, Medical Corps, Candidate of Medical Sciences

TITLE: Some changes in higher nervous activity under acceleration

PERIODICAL: Voyenno-meditsinskiy zhurnal, no. 6, 1961, 54-58

TEXT: Because of the effects of acceleration in flight on the brain the authors studied the functional state of the higher sections of the central nervous system under radial acceleration. Radial acceleration was effected in a centrifuge with a seat equipped for recording motor reflexes and studying the structure of certain special volitional movements. The first series of tests studied the state of conditioned motor reflexes to light and sound stimuli under varying degrees of acceleration.

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Card 1/4

Some changes in higher ...

The results showed that under relatively low acceleration of 3-4 g a slight increase in the latent period of the motor conditioned response was noted. As the experiment was repeated, the difference in the latent period became less marked. At greater accelerations of 5-6 g the picture was different. While the latent period of response to a sound stimulus increased slightly, there was a marked increase in the latent period of response to light stimulus. To check the pilot's work capacity under acceleration a second series of tests studied the effects of acceleration on motor actions simulating working movements that a pilot has normally to make. It was found that the changes in the structure of the motor action varied with the degree of acceleration and the plane in which the activating arm moved. The most marked increase in movement time was noted when the arm was shifted in a direction opposite to the action of the centrifugal force. When the arm was moved in a plane perpendicular to the action of centrifugal forces, the movement time increased only slightly. When an anti-gravity suit was worn under only slight acceleration, the latent period of conditioned motor reflexes

Card 2/4

Some changes in higher ...

to light and sound stimuli increased slightly. With greater acceleration, the latent period changed much less than when no anti-gravity suit was worn. The use of an anti-gravity suit also led to less marked changes in the structure of working movements. Various researchers have noted that increasing acceleration leads to progressive drop in the blood pressure of the cerebral vessels. The use of an anti-gravity suit, however, helps maintain blood circulation at a high level. This is corroborated by the authors' previous research (1954-56): persons wearing an anti-gravity suit and subjected to acceleration had a higher blood pressure in the brachial artery than persons with no anti-gravity suit. The authors view this as experimental proof that the increased resistance to acceleration afforded by an anti-gravity suit derives mainly from compensation of the shifts in the blood circulation system. The authors disagree with certain Soviet researchers (G.L. Komendantov, 1952; D.M. Savin, 1953), who attribute the profound disturbances in the activity of the central nervous system caused by acceleration to afferent pulsation from the interoreceptors of the viscera. The authors assert that in the present case afferent pulsation from these receptors has no

Some changes in higher...

definite significance; the disturbances are obviously caused by dystrophy of cerebral blood circulation as a result of the drop in blood pressure in the cerebral vessels. The visual disturbances under acceleration are probably caused by dystrophy of the peripheral section of the visual analyzer, i.e., the retina. On the basis of their observations the authors conclude that sound signaling is preferable to visual signaling in flying and could be used as a basis for a more rational distribution of control levers and switches in a plane's cabin. There are 2 tables and 2 figures.

SUBMITTED: November, 1960

Card 4/4

USACHEV, V.V. (Moskva)

Effect of radial acceleration on motor conditioned reflexes.
Zhur. vys. nerv. deiat. 11 no.1:22-29 Ja-F '61. (MIRA 14:5)
(CONDITIONED RESPONSE) (ACCELERATION—PHYSIOLOGICAL EFFECT)

ACCESSION NR: AT4042649 S/0000/63/000/000/0044/0047

AUTHOR: Babushkin, V. I.; Usachev, V. V.

TITLE: The efficiency of man under the influence of radial acceleration and positive pressure respiration of oxygen

SOURCE: Konferentsiya po aviatsionnoy i kosmicheskoy meditsine, 1963. Aviatsionnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy* konferentsii. Moscow, 1963, 44-47

TOPIC TAGS: acceleration, centrifuge, radial acceleration, positive pressure respiration, oxygen respiration, high altitude flying, pressure suit, counter-pressure, antigravity suit

ABSTRACT: Studies on the heart rate and respiration, as well as the ability to perform different movements which simulated the working operations of a flier in an emergency situation, were carried out in a centrifuge and confirmed in flight. These investigations showed that a pressure suit increases the resistance of a man to an acceleration of 0.5-1 G, decreasing the heart rate without interfering with movement as long as there is no pressure in the elastic parts of the suit. Thus, under the influence of acceleration and oxygen respiration at normal pressure, the heart rate increased by 20-60 beats/minute, while with oxygen respiration under

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ACCESSION NR: AT4042649

positive pressure (350 mm of water) it increased only by 16-42 beats/minute. The use of an antigravity suit under these conditions caused an even smaller increase in heart rate (8-30/min). Respiration under pressure without acceleration had no significant effect on the length of expiration and inspiration. Analysis of data obtained at an acceleration of 4 G with respiration of oxygen under a pressure of 400-1000 mm of water showed that the physiological effects of a pressure suit (high-altitude suit) are essentially the same as those of an antigravity suit. An investigation of movement under conditions of acceleration and respiration under excess pressure, using a pressure suit, showed significant impairment of movement, expressed as an increase in the time required to carry out the prescribed hand & foot movements. It should also be mentioned that during positive pressure respiration with the application of counterpressure under conditions of prolonged acceleration, less pronounced shifts in respiration and cardiovascular function were observed than during respiration with oxygen at normal pressure. This could be due to the increase in tone of the skeletal musculature, particularly the respiratory and abdominal muscles.

ASSOCIATION: none

SUBMITTED: 27Sep63 ENCL: 00 SUB CODE: LS, PH

Card 2/2 NO REF SOV: 000 OTHER: 000

ACCESSION NR: AT4042650 S/0000/63/000/000/0047/0051

AUTHOR: Babushkin, V. I.; Isakov, P. K.; Malkin, V. B.; Usachev, V. V.

TITLE: Physiological reactions to radial accelerations

SOURCE: Konferentsiya po aviatsionnoy i kosmicheskoy meditsine, 1963. Aviatsionnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy* konferentsii. Moscow, 1963, 47-51

TOPIC TAGS: acceleration effect, radial acceleration, cardiovascular system, respiratory system, pilot testing, work capacity, compensating reaction

ABSTRACT: Experiments to determine the effects of acceleration on various physiological functions and the work capacity of pilots were performed on centrifuges and in flights. Particular attention was paid to the effects of acceleration on the cardiovascular and respiratory systems. Examination of data indicated that persons able to withstand accelerations of 6 to 7 g reacted to acceleration stress by an increase in arterial pressure, the heartbeat rate, and the respiration rate. These indices were less well defined in persons who could not withstand acceleration well. Analysis of experimental data has shown that an increase in pulmonary

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ACCESSION NR: AT4042650

ventilation accompanies acceleration stress. The pulmonary ventilation of pilots subjected to an acceleration stress of 5 g increases more than two fold. This effect can be reduced considerably by the use of high-altitude pressure suits. When pilots are subjected to accelerations of between 5 and 6 g, oxygen consumption almost doubles and the production of CO_2 by the body increases significantly. Results of experiments on gas exchange have indicated that during the first five minutes after acceleration has taken effect, the consumption of oxygen remains increased while the respiration coefficient remains close to 1. This indicates that acceleration causes a significant increase in the intensity of the metabolic processes. The use of a high-altitude pressure suit reduces the consumption of oxygen and of energy requirements. The development of compensating reactions during acceleration, such as the increase of muscle tone, the increase of the functional activity of the cardiovascular system, and the increase in respiration, brings about an increase in energy requirements. The use of a high-altitude pressure suit has the effect of relieving the organism of part of the "load," thereby increasing the physiological capabilities of the pilot.

ASSOCIATION: none

Card 2/3

ACCESSION NR: AT4042650

SUBMITTED: 27Sep63 ENCL: 00 SUB CODE: LS

NO REF SOV: 000 OTHER: 000

Card 3/3

BEKTABEGOV, Aleksey Konstantinovich; [illegible]ACHEV, Vadim Vasil'yevich; KOROL'KOV, V.G., red.

[Stereophonic sound pickups] Stereofonicheskie zvukosnimateli. Moskva, Energiia, 1964. 38 p. (Massovaia radiobiblioteka, no.552) (MIRA 18:9)

USACHEV, Ya. G.

USSR/Scientists - Biography

Card : 1/1

Authors : Zolotukhina-Usacheva, A. Ya.

Title : Jacob Grigor'evich Usachev

Periodical : Vest. Mash., 34, Ed. 6, 101 - 103, June 1954

Abstract : A biographical article commemorating the 80 th anniversary of the birth of Jacob Girgor'evich Usachev, a Russian scientist who distinguished himself in the field of machine construction.

Institution : ...

Submitted : ...

USACHEV, Ya. G.

USSR/Engineering

Card : 1/1

Authors : Prushkov, B. T., Cand. Tech. Sc., Docent

Title : Ya. G. Usachev, founder of the high-production geometry of cutters

Periodical : Vest. Mash., 34, Ed. 6, 103 - 105, June 1954

Abstract : Usachev's methods of applying geometrical principles in the shaping of cutting tools are reviewed and the findings of Soviet experimenters are described and compared with his theories. Ten Russian references, latest 1951. Drawings.

Institution : ...

Submitted : ...

USACHEV Ye. P.

57-12-14/19

AUTHORS: Makovskiy, F. A., Usachev, Ye. P.

TITLE: Effects of the Surface Treatment on the Properties of Copper Oxide Rectifiers (Vliyaniye poverkhnostnoy obrabotky na svoystva mednozakisnykh vypryamiteley).

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1957, Vol. 27, Nr 12, pp. 2786-2788 (USSR)

ABSTRACT: In this paper the influence of the surface treatment of cuprous oxide previous to the application of the silver electrode is investigated. 7 mm plates from technical copper-oxide rectifiers were used as samples. The influence of the following types of surface treatment was investigated: Corrosion by acids, grinding sand blasting, polishing and bombardment by ions. The lowest transition resistance was obtained at a corrosion by acids and after grinding the surface of the cuprous oxide. It appeared, that grinding causes an increase, corrosion, however, a decrease of the d.c. value in comparison to the original value. The magnitude of the reverse current hardly modifies. According to the curves recorded in the experiments the increase of the d.c. value after grinding amounted to

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about 30 %, and the reduction after corrosion by acids to about 20 %. This latter fact is explained by the circumstance, that the copper-oxide rectifiers undergo an additional treatment in a sodium-chlorate solution technical production process after corrosion by a nitric acid solution. It is assumed, that the increase of the d.c. value may be caused by a reduction of the thickness of the cuprous oxide layer by the grinding process. The experiments showed, that the magnitude of the d.c. is essentially dependent upon the type of treatment of the surface of the cuprous oxide previous to the application of the top electrode. An analysis to that respect (previous to the application of the silver electrode) shows, that grinding leads to an increase of the d.c.-value and of the coefficient of rectification, whereas the corrosion by a 30 % solution of HNO_3 and by other acids (H_2SO_4, HNO_3 and aqua regia)

leads to a reduction of both quantities. The authors are of the opinion, that this is caused by the mosaic-like structure of the surface after grinding and the different orientation of the separate crystals, whereas a thin "chemical" layer

Effects of the Surface Treatment on the Properties of Copper Oxide Rectifiers

with a lack of oxygen is produced by the process of corroding the surface of the cuprous oxide by acids. The removal of this layer by grinding leads to an increase of the d.c. value by a factor of 1'5 to 2. The formation of the chemical layer is probably connected with a partial disturbation of the oxygen balance at the surface of the cuprous oxide. This is also confirmed by the fact, that a corrosion in a more powerful oxydating substance (H_2O_2) will not lead to formation of the chemical layer. There are 2 figures.

ASSOCIATION: Physico-Technical Institute of the Kazan' Brench AS USSR (Fiziko-tekhnicheskiy institut Kazanskogo filiala AN SSSR).

SUBMITTED: May 16, 1957

AVAILABLE: Library of Congress

Card 3/3

AUTHORS: Makovskiy, F. A., Usachev, Ye. P. 57-28-4-20/39

TITLE: The Influence of the Material of the Upper Electrode Upon the Electric Properties of Cuprous Oxide Rectifiers (Vliyaniye materiala verkhnego elektroda na elektricheskiye svoystva mednozakisnykh vypryamiteley)

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1958, Vol. 28, Nr 4, pp. 788-789 (USSR)

ABSTRACT: The authors investigated 7 mm-platelets, a semiproduct of technical cuprous oxide rectifiers without the upper electrode. The conditions for the surface-treatment of the cuprous oxide before the application of the upper electrode were the same in all investigated samples. The upper electrodes of different metals were applied onto all investigated samples under equal conditions by means of evaporation of the respective metal in a $\sim 10^{-5}$ mm torr-vacuum. In addition to this mercury-electrodes and electrodes of a Pb-Bi-Cd-alloy and of colloidal graphite were used. The measurement of the values of the direct and the backward

Card 1/2

current took place at room temperature. Comparatively pure metals were used as electrodes. The results of the investigations showed that the value of the direct current in 7 mm-cuprous oxide platelets with upper electrodes of different metals decreases in the following order: Au, Ag, Pb-Bi-Cd-alloy, Hg, C, Zn, Cd, Bi, Te, Sn, Ge, Cu, Al, Sb, Pb, Cr, Tl. The value of the backward current remains unchanged and thus does not depend on the material of the upper electrode. The obtained results on the modification of the direct current in dependence on the material of the upper electrode, with the taking into account of the homogeneity of the state of the surface of cuprous oxide in all samples, are by the authors' opinion to be ascribed to the contact-resistance at the boundary of cuprous oxide with the upper electrode. There are 3 references, all of which are Soviet.

ASSOCIATION: Fiziko-tekhnicheskiy institut Kazanskogo filiala AN SSSR (Physical-Technical Institute of the Kazan' Branch, AS USSR)

SUBMITTED: December 16, 1957

20969

S/058/61/000/004/016/042
A001/A101

9.2150

AUTHOR: Usachev, Ye.P.

TITLE: Investigation of rectifying properties of the cuprous oxide-tellurium system

PERIODICAL: Referativnyy zhurnal. Fizika, no 4, 1961, 313-314, abstract 4E409 (V sb. "Materialy 1-y konferentsii molodykh nauchn. rabot. g. Kazani. Fiz.-tekhn. i matem. sektsiya". Kazan', 1959, 35 - 41)

TEXT: The rectifying properties of the Te-Cu_2O system were investigated. Te was applied to a Cu_2O plate having dimensions 1.2 x 7 x 0.1 cm^3 and was melted in an electric furnace. While melting, it spread over the surface producing a good contact. The specimens were cooled in air. A transient layer of high resistance was formed between Cu_2O and Te during sintering. The thickness of this layer determined the value of the rectification coefficient. In some experiments, a $\sim$10 μ thick SiO_2 film was applied to the Cu_2O plate prior to Te melting. It is assumed that this film was incorporated into the alloy as an admixture during Te

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20969

Investigation of rectifying properties ... S/058/61/000/004/016/042
A001/A101

melting. The film introduction improved diode characteristics. The maximum value of rectification coefficient for this system amounts to 50.

Yu. N. Rufov

[Abstracter's note: Complete translation.]

Card 2/2

USACHEV, Ye.P.

Concerning the performance of rectifiers with a titanium dioxide base in the audio-frequency range. Radiotekh. i elektron. 7 no.8:1440-1443 Ag '62. (MIRA 15:8)

1. Fiziko-tekhnicheskiy institut Kazanskogo filiala AN SSSR.
(Semiconductors) (Transistors)

L 64285-65 EWT(l)/EWT(m)/EWP(t)/EWP(b)/EWA(h) IJP(c) JD/GS

ACCESSION NR: AT5020472 UR/0000/64/000/000/0262/0275

AUTHOR: Makovskiy, F. A.; Usachev, Ye. P.

TITLE: High-temperature rectifiers based on titanium dioxide

SOURCE: Mezhvuzovskaya nauchno-tekhnicheskaya konferentsiya po fizike poluprovodnikov (poverkhnostnyye i kontaktnyye yavleniya). Tomsk, 1962. Poverkhnostnyye i kontaktnyye yavleniya v poluprovodnikakh (Surface and contact phenomena in semiconductors). Tomsk, Izd-vo Tomskogo univ., 1964, 262-275

TOPIC TAGS: titanium dioxide, semiconducting material, semiconductor diode, semiconductor research, high temperature material

ABSTRACT: The authors study flat-contact diodes made from commercial titanium. These rectifiers are more efficient than the ordinary point-contact diodes. The basic advantage of titanium rectifiers is their ability to operate in a wide temperature range (from -60 to +200°C). A change is observed in some sections of the silver electrode in these rectifiers from *n*- to *p*-type thermoelectromotive force. On the basis of this phenomenon, a hypothesis is made on the formation of a *p-n* junction in the surface layer of titanium dioxide where rectification of electric current takes place. The rectifying properties of titanium diodes depend to

Card 1/2

L 64285-65

ACCESSION NR: AT5020472

6

a great extent on the quality of the titanium dioxide surface, where the upper electrode is applied. Secondary oxidation of the titanium dioxide semiconductor surface creates a very thin layer of titanium dioxide which is close to the stoichiometric composition with high dielectric properties. This film increases the total resistance and creates more favorable conditions for reverse currents than for forward currents. Artificial application of a titanium dioxide film from a titanium ester of orthotitanic acid can be used to vary the thickness of the film, and thus the values of the forward and reverse currents. A gold electrode sintered into the titanium dioxide makes a more reliable contact than silver. Pulse conditions eliminate the thermal effect in titanium rectifiers. The best titanium diodes produced by the authors withstand reverse voltages of several tens of volts. This is equivalent to 3-4 series-connected selenium rectifiers. Commercial titanium can be used to produce diodes with satisfactory characteristics. It should be expected that the use of titanium of higher purity will produce rectifiers with better electric properties. Orig. art. has: 11 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut Kazanskogo filiala AN SSSR (Physico-technical Institute, Kazan Affiliate, AN SSSR) 44

SUBMITTED: 060ct64 ENCL: 00 SUB CODE: EC

NO REF SOV: 002 OTHER: 010

Card 2/2

L 64287-65 EWT(l)/EWT(m)/EWP(t)/EWP(b)/EWA(h) IJP(c) JD/GS

ACCESSION NR: AT5020473 UR/0000/64/000/000/0276/0283

AUTHOR: Makovskiy, F. A.; Usachev, Ye. P.; Kichatova, V. V.

TITLE: Effect of humidity on the electrical properties of titanium dioxide rectifiers

SOURCE: Mezhvuzovskaya nauchno-tekhnicheskaya konferentsiya po fizike poluprovodnikov (poverkhnostnyye i kontaktnyye yavleniya). Tomsk, 1962. Poverkhnostnyye i kontaktnyye yavleniya v poluprovodnikakh (Surface and contact phenomena in semiconductors). Tomsk, Izd-vo Tomskogo univ., 1964, 276-283

TOPIC TAGS: titanium dioxide, semiconducting material, semiconductor diode, atmospheric humidity, electric property, semiconductor research

ABSTRACT: The authors study the effect of the ambient medium on the electrical properties of rectifiers based on titanium dioxide. Forward and reverse currents were measured in diodes made from commercial titanium as a function of changes in the ambient atmosphere at room temperature. For the reverse current studies, the specimen was first dried in a vacuum and then exposed to water vapor or the vapor of some other liquid. It was found that moisture reduces the reverse current in the diode and that the process is reversible. Water is adsorbed on the surface in

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L 64287-65

ACCESSION NR: AT5020473 2

a shorter time than that required to remove the moisture. Tests with dry ethyl alcohol and hydrogen peroxide gave the same type of results. A theoretical explanation is given for the experimental results. Experiments on measurements of forward currents showed that forward currents in rectifiers anodized in NaOH increase after exposure to water. This effect is also reversible. Subsequent experiments showed that the reverse current increases with humidity after anodizing the semiconductor surface. Measurements of the barrier layer capacitance in titanium rectifiers showed that the thickness of the barrier layer depends on the relative humidity of the ambient atmosphere. The thickness of the barrier layer decreases with a reduction in relative humidity. This phenomenon is observed in diode specimens where the reverse currents decrease with an increase in moisture content. Orig. art. has: 5 figures, 3 formulas.

ASSOCIATION: Fiziko-tekhnicheskiy institut Kazanskiy filial AN SSSR (Physicotechnical Institute, Kazan Affiliate, AN SSSR) 44

SUBMITTED: 060ct64 ENCL: 00 SUB CODE: EC, SS

NO REF SOV: 003 OTHER: 006

Card 2/2

L 1111-66 EWT(l)/EWT(m)/EPF(c)/T/EWP(t)/EWP(b)/EWA(h) IJP(c) JD/AT/GS

ACCESSION NR: AT5020476 UR/0000/64/000/000/0296/0303

AUTHORS: Usachev, Ye. P.; Sannikov, S. V.

TITLE: Investigation of volt-ampere characteristics of titanium dioxide type rectifiers in pulsed and static conditions

SOURCE: Mezhvuzovskaya nauchno-tekhnicheskaya konferentsiya po fizike poluprovodnikov (poverkhnostnyye i kontaktnyye yavleniya). Tomsk, 1962. Poverkhnostnyye i kontaktnyye yavleniya v poluprovodnikakh (Surface and contact phenomena in semiconductors). Tomsk, Izd-vo Tomskogo univ., 1964, 296-303

TOPIC TAGS: titanium dioxide, titanium dioxide rectifier, semiconductor

ABSTRACT: The inverse volt-ampere characteristics of partially reduced TiO_2 semiconductors in pulsed and static states were determined. The experimental setup is shown schematically in Fig. 1 on the Enclosure. The specimens had the form of 10-mm round washers. The upper electrode of 0.5 cm^2 area consisted of Ag and the lower electrode of metallic Ti. Typical experimental results are shown in Fig. 2 on the Enclosure. It was found that the inverse volt-ampere dependence was linear up to 1.5-2 volts. From the temperature dependence of the inverse resistance it is concluded that TiO_2 semiconductors possess two impurity

Card 1/4

L 1111-66

ACCESSION NR: AT5020476

3

levels of 0.15 ev and 0.5 ev respectively. Orig. art. has: 9 graphs and 2 equations.

ASSOCIATION: FTI, Kazanskiy filial, Akademii nauk SSSR (FTI, Kazan Branch of the Academy of Sciences, SSSR)

44,55

SUBMITTED: 060ct64 ENCL: 02 SUB CODE: EC

NO REF SOV: 005 OTHER: 000

Card 2/4

L 1111-66

ACCESSION NR: AT5020476

ENCLOSURE: 01

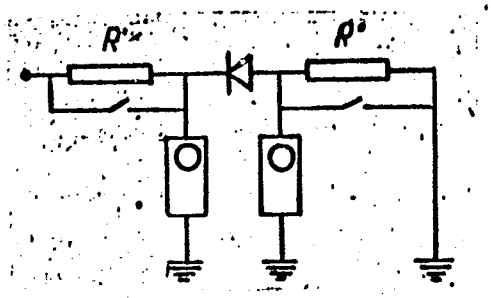

Fig. 1. Scheme for determining electrical parameters of semiconductors in pulsed states. (R' and R" are two identical ohmic resistors.)

Card 3/4

L 1111-66

ACCESSION NR: AT5020476

ENCLOSURE: 02

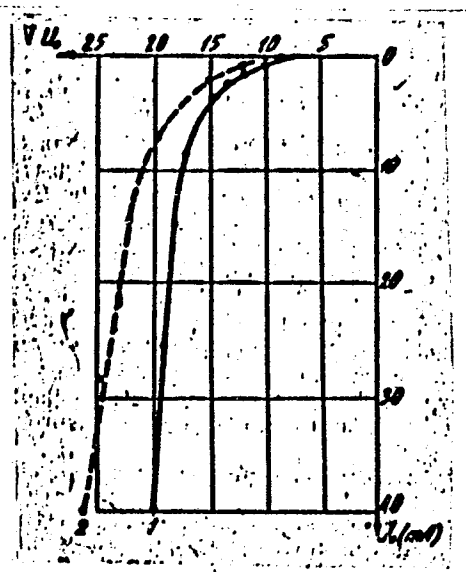

Fig. 2. Inverse volt-ampere characteristics of semiconductor. (1- static, 2- pulsed state)

Card 4/4

L 1110-66 EWT(1)/EWT(m)/EPF(c)/T/EWP(t)/EWP(b)/EWA(h) IJP(c) JD/AT/GS

ACCESSION NR: AT5020477 UR/0000/64/000/000/0304/0313

AUTHOR: Usachev, Ye. P.

TITLE: Capacitive properties of rectifiers based on titanium dioxide semiconductors

SOURCE: Mezhvuzovskaya nauchno-tekhnicheskaya konferentsiya po fizike poluprovodnikov (poverkhnostnyye i kontaktnyye yavleniya). Tomsk, 1962. Poverkhnostnyye i kontaktnyye yavleniya v poluprovodnikakh (Surface and contact phenomena in semiconductors). Tomsk, Izd-vo Tomskogo univ., 1964, 304-313

TOPIC TAGS: titanium dioxide rectifier, titanium dioxide, titanium compound, semiconductor, capacitance

ABSTRACT: The dependence of the complex impedance of TiO_2 specimens on the frequency of the applied potential and the effect of temperature and steady displacement potential on the capacity and resistance of the barrier layer were determined. The specimens had a washer-type shape of 10-mm thickness. The upper electrode consisted of either silver or gold of 0.5-cm^2 area, and the lower electrode was of metallic titanium. The capacity and total barrier layer resistance were calculated by the method of complex plane locus and also determined experimentally by the method of G. B. Abdullayev (Doktorskaya dissertatsiya LFTI). The experimental results for the

Card 1/4

L 1110-66

ACCESSION NR: AT5020477

3

frequency dependence and temperature dependence for TiO_2 rectifiers are shown graphically in Figures 1 and 2 on the Enclosure. From the experimental results it is concluded that: the impurities in the barrier layer of TiO_2 are evenly distributed; the charge carriers have extremely low mobilities; the thermal dependence of capacity may be described by the theoretical expression for p - n junction; there exist two impurity energy levels having an energy of activation E_1 = 0.2 ev and E_2 = 0.48 ev respectively. Orig. art. has: 8 graphs.

ASSOCIATION: Fiziko-tekhnicheskiy institut, Kazanskiy filial, AN SSSR (Physico-technical Institute, Kazan Branch, AN SSSR)

SUBMITTED: 060ct64 ENCL: 02 SUB CODE: EC,NE

NO REF SOV: 006 OTHER: 001

Card 2/4

L 1110-66

ACCESSION NR: AT5020477

ENCLOSURE: 01

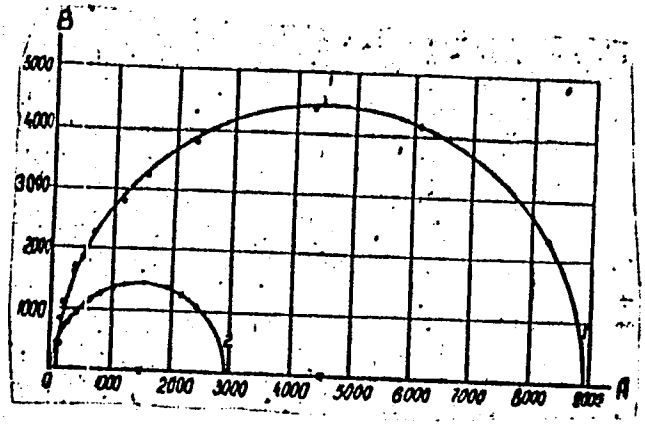

Fig. 1. Frequency dependence of the total resistance $z = x - iy$ of TiO_2 rectifiers. 1 - displacement potential 0; 2 - displacement potential -3v. Upper electrode silver

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L 1110-66

ACCESSION NR: AT5020477

ENCLOSURE: 02

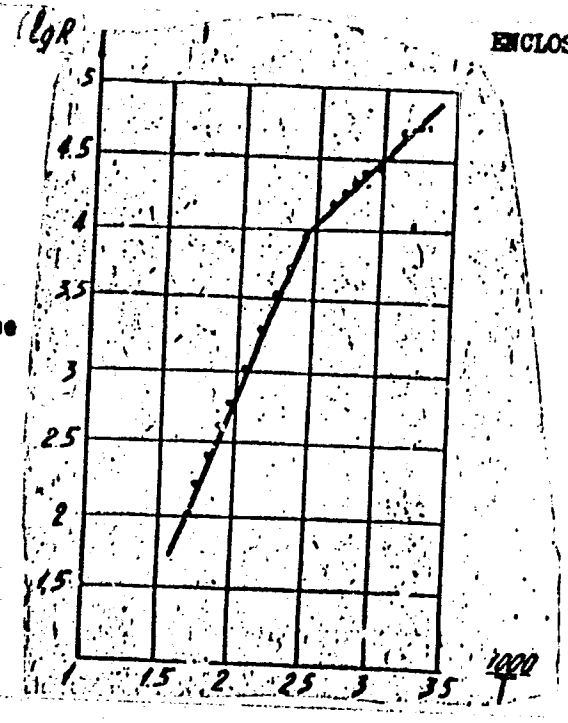

Fig. 2. The temperature dependence of the differential resistance of TiO_2 rectifiers

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ACC NR: AR6035049 SOURCE CODE: UR/0058/66/000/008/E069/E069

AUTHOR: Apas'yeva, V. P.; Sannikova, S. V.; Usachev, Ye. P.

TITLE: Electrical properties of thin films

SOURCE: Ref. zh. Fizika, Abs. 8E524

REF SOURCE: Sb. Tezisy dokl. Yubileyn. nauchn. konferentsii, posvyashch, XX-letiyu in-ta. Kazansk. fiz.-tekhn. in-t, 1966. Sekts. fiz. n. Kazan', 1966, 35-36

TOPIC TAGS: Hall mobility, indium, thin film, semiconductor, Hall coefficient, electroconductivity, indium antimonide

ABSTRACT: The discrete spray method (RZhFiz, 1963, 4E448) (1) was used to obtain stoichiometric n-InSb film with a thickness (d) of 0.05-1.5 μ. The dependence of the Hall coefficient (R), Hall mobility (μ_H), and electroconductivity (σ) on (d) was investigated. It was found that μ_H and R increase with an increase in d, and that σ is independent of d. In samples with a large crystal surface, μ_H was as high as 3260 $cm^2/v \cdot sec$; in fine crystal samples μ_H was

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ACC NR: AR6035049

1800 $cm^2/v \cdot sec$. Where $\sigma = 15—30$ $ohm^{-1} \cdot cm^{-1}$, the electron density was $(1—6) \cdot 10^{17} cm^{-3}$, R = (100—200)$cm^3$/conl. On the basis of the temperature correlations of σ and R in the 77—500K range, the activation energy was computed to be 0.20--0.22 and 0.18—0.25 ev, respectively. The data obtained agree with those computed in I for an indium antimonide film within the same temperature range. [Translation of abstract] [SP]

SUB CODE: 20/

Card 2/2

L 21809-65 EWT(d)/T/EWP(1) IJP(c)

ACCESSION NR: AP5001977 S/0020/64/159/006/1238/1239

AUTHOR: Usachev, Ye. S., Dorodnitsyn, A. A. (Academician)

TITLE: Maximum distributions in a stochastic learning-ability model

SOURCE: AN SSSR. Doklady, v. 159, no. 6, 1964, 1238-1239

TOPIC TAGS: learning ability, learning automaton

ABSTRACT: The asymptotic properties of a homogeneous Markov chain p_t are studied. The chain describes the distribution of probabilities of the "subject's" responses to teaching in an R. Bush and F. Mosteller learning-ability model ("Stochastic Learning-Ability Models," book). Equations are set up for the characteristic functions $f(t)$ of maximum distributions: these equations may give three types of responses of the medium interacting with the subject: (1) Medium responses are independent of subject's responses; (2) Medium responses are single-valuedly determined by subject's responses; and (3) Medium responses

Card 1/2

L 24809-65

ACCESSION NR: AP5001977

3

stationary-stochastically depend on subject's responses. "The authors wish to thank V. G. Sragovich for his constant help, and Yu. A. Shreyder for his valuable advice." Orig. art. has: 8 formulas.

ASSOCIATION: Vy*chislitel'ny*y tsentr AN SSSR (Computing Center, AN SSSR)

SUBMITTED: 25Apr64 ENCL: 00

SUB CODE: DP NO REF SOV: 002 OTHER: 002

Card 2/2

MILOVANOVA, A. S.; BORISOVA, L. A.; USACHEV, Yu. S.

Data on the epidemiology and reduced morbidity of diphtheria in South Kazakhstan Province. Zdrav. Kazakh. no.4:61-66 '62. (MIRA 15:6)

1. Iz Kazakhskogo instituta epidemiologii, mikrobiologii i gigiyeny (nauchnyy rukovoditel' - professor Kh. Zh. Zhumatov) i Yuzhno-Kazakhstanskoy oblsanepidstantsii.

(SOUTH KAZAKHSTAN PROVINCE--DIPHTHERIA)

USACHEV, Yu.D., nauchnyy sotrudnik.

Atomic nucleus. Nauka i zhizn' 23 no.9:5-9 S '56. (MLRA 9:10)

1.Fizicheskiy institut Akademii nauk SSSR.
(Nuclei, Atomic)

MET'YUS, P. [Matthews, P.T.]; RITUS, V.I. [translator]; USACHEV, Yu.D. [translator]; BURTSEV, A.K., red.; REZOUKHOVA, A.J., tekhn.red.

[The relativistic quantum theory of elementary particle interactions] Relativistskaia kvantovaia teoriia vzaimodeistvii elementarnykh chastits. Moskva, Izd-vo inostr.lit-ry, 1959. 184 p. (Translated from the English) (MIRA 12:11)
(Particles, Elementary) (Quantum theory)

ACCESSION NR: AR4036332 S/0275/64/000/003/B022/B022

SOURCE: Referativny*y zhurnal. Elektronika i yeye primeniye, Abs. 3B140

AUTHOR: Makovskiy, F. A.; Usachev, Ye. P.

TITLE: Rectifying properties of a cuprous-oxide bismuth system

CITED SOURCE: Izv. Leningr. elektrotekhn. in-ta, vy*p. 51, 1963, 25-31

TOPIC TAGS: cuprous oxide bismuth rectifier, voltage current characteristic, temperature characteristic, rectification coefficient

TRANSLATION: The rectifying properties of a cuprous-oxide and dismuth system are described. The voltage-current and the temperature characteristics of samples with a rectification coefficient 10^3 are determined. Rectifiers are the cuprous-oxide and bismuth type have a higher limit of working temperature (110C) than ordinary rectifiers made of cuprous oxide. Bibliography, 4 titles. L. V.

DATE ACQ: 10Apr64 SUB CODE: EE ENCL: 00

Card 1/1

ACCESSION NR: AP4012544 S/0056/64/046/001/0187/0195

AUTHOR: Usachev, Yu. D.

TITLE: Infinite time formalism in quantum field theory

SOURCE: Zhurnal eksper. i teoret. fiz. v. 46, no. 1, 1964, 187-195

TOPIC TAGS: infinite time formalism, quantum field theory, Tomonaga formalism, Schwinger formalism, Heisenberg representation, Schrodinger representation, interaction representation, single time formalism, state vector equations, field operator, equation of motion, S matrix

ABSTRACT: A new variant of the infinite time formalism (i.t.f.) is proposed, which is free of the defects of the Tomonaga and Schwinger versions, and in which the Schrodinger representation can be written down on an equal footing with the Heisenberg and the interaction representations, the field operators do not have a two-fold time dependence, the equations of motion are written in terms of densities

Card 1/2

ACCESSION NR: AP4012544

on the same basis as the state-vector equations, the transition to the single time formalism is by simple integration of the variational-derivative equations, and all representations are equivalent and related by a unitary transformation. The equations of motion of the field operators are derived in the i.t.f. and the connection with the usual S-matrix is discussed. "In conclusion, I express deep gratitude to Prof. M. A. Markov for constant interest in the work and fruitful discussions, and to D. A. Kirzhnits for valuable advice and comments." Orig. art. has: 41 formulas.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Physics Institute, AN SSSR)

SUBMITTED: 23Jan63 DATE ACQ: 26Feb64 ENCL: 00

SUB CODE: PH NO REF SOV: 003 OTHER: 004

Card 2/2

USACHEVA, A.A.

Geographic map work in the sixth class. Geog. v shkole 19 no.6:58-59 N-D '56. (MLRA 10:1)

(Geography--Study and teaching)

USACHEVA, A.A., inzh.

Provide satisfactory purification of waste water from leather factories. Leg. prom. 17 no.10:17-21 O '57. (MIRA 10:12)
(Factory and trade waste) (Water--Purification)
(Leather industry)

USACHEVA, A. A.

Cand Tec Sci, Diss -- "Waste waters of tanneries and investigation of their purification in horizontal settling tanks before discharge into city sewage systems". Gor'kiy, 1961. 21 pp, 21 cm (Min of Higher and Inter Spec Educ RSFSR. Gor'kiy Engr-Const Inst imeni V. P. Chkalov), 200 copies, Not for sale (KL, No 9, 1961, p 184, No 24373). [61-54870]

USACHEVA, A.M.

Survival of terrestrial helminths eggs in water supply and bottom deposits. Gig. sanit., Moskva No.12:12-17 Dec 51. (CIML 21:4)

1. Author deceased.

L 21794-66 EWT(1)/EWA(h) GW

ACC NR: AP6002922 (N) SOURCE CODE: UR/0286/65/000/024/0083/0083

AUTHORS: Naumenko-Bondarenko, I. I.; Gorin, V. P.; Usacheva, A. M.; Stepin, M. D.; Yurkovetskiy, S. G.; Aksenov, M. Z.; Yefremov, V. V.; Kolentsev, A. M.; Baryshev, Yu. M.; Lad'ina, V. M.; Fel'dman, Yu. S.

ORG: none

TITLE: A ground gravimeter. Class 42, No. 177106

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965, 83

TOPIC TAGS: gravimetric analysis, measuring instrument, measurement accuracy gravimeter

ABSTRACT: This Author Certificate presents a ground gravimeter containing a quartz elastic sensitive system, units of distance control and control of the rotation angle of a micrometric screw, and an assembly of a photoelectric device with an illuminator. The design increases the precision of the measurements and makes possible the determination of the errors of the distance transmission. The unit of distance control in the gravimeter has precision multiple-turn linear potentiometers interconnected in a bridge circuit. One of the potentiometers is mounted in the gravimeter and the other on a control panel. The rotors of these potentiometers are connected with a tachometer. To reduce the temperature effects on the quartz sensitive system, the latter system is insulated from the photoelectric device.

SUB CODE: 08/ SUBM DATE: 21Jan64

Card 1/1 ULR UDC: 550.831

ACCESSION NR: AP5011024 UR/0079/64/034/011/3606/3609

B

AUTHOR: Kamay, G.; Usacheva, G. M.

TITLE: Synthesis of assymetric phosphonium compounds with n-dodecyl and n-octadecyl radicals and attempts to separate them into optical antipodes

SOURCE: Zhurnal obshchey khimii, v. 34, no. 11, 1964, 3606-3609

TOPIC TAGS: organic phosphorus compound, organic synthetic process, bromide, plant, parasite

Abstract: New asymmetric phosphonium with n-dodecyl and n-octadecyl radicals were synthesized by the addition to the corresponding bromides to tertiary asymmetric phosphines. In tests of some of the synthesized phosphonium compounds on cultures of the pathogenic fungi Trichophyton gupscum and Equidermophyt,

the compound $\left[\begin{matrix} C_5H_{11} & & C_2H_5 \\ & P & \\ C_{18}H_{37} & & C_6H_5 \end{matrix}\right]$ Br exhibited fungicidal activity

Card 1/2

ACCESSION NR: AP5011024

Attempts to separate the synthesized phosphonium salts into their optical antipodes with the acid silver salt of levorotatory dibenzoyltartaric acid and through the inclusion products with urea, as well as in the presence of additives of optically active substances: d-glucose, d-fructose, and d-tartatic acid, proved unsuccessful. Orig. art. has 3 formulas and 3 tables.

ASSOCIATION: none

SUBMITTED: 17Jul63 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 003 OTHER: 004 JPRS

Card 2/2

L 04851-67 EWT(j)/EWT(m) RM

ACC NR: AP7000238 SOURCE CODE: UR/0079/66/036/004/0704/0708

AUTHOR: Chadayeva, N. A.; Kamay, G. Kh.; Usacheva, G. M. 29 B

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"Sulfur-Containing Organic Arsenic Compounds. II. New Method of Producing Thioesters of Acids of Trivalent Arsenic"

Moscow, Zhurnal Obshchey Khimii, Vol 36, No 4, 1966, pp 704-708

Abstract: Alkyl and aryl thioesters of acids of trivalent arsenic were synthesized by the reaction of alkyl esters of acids of trivalent arsenic with mercaptans. This method of producing thioesters of acids of trivalent arsenic is distinguished not only by simplicity and good yields, but also by the purity of the "crude" products. Seven thioesters synthesized by the action of 3-chloro-2-acetoxypropylthiol and 3-chloro-2-hydroxypropylthiol on the corresponding alkyl esters of acids of trivalent arsenic. Orig. art. has: 1 table. [JPRS: 37,177]

TOPIC TAGS: organic arsenic compound, organic sulfur compound, mercaptan, ester, organic synthetic process

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TRILENKO, Petr Andreyevich; USACHEVA, I.G., redaktor; VESKOVA, Ye.I., tekhnicheskiy redaktor; GUREVICH, M.M., tekhnicheskiy redaktor

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